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ABSTRACT

Previous research has shown that different emotions are associated with different attributions. To examine the situational context, i.e., the relationships between attributions and emotions as well as the inter-relationships within emotions and within attributions under separate success and failure conditions, 208 college students performed addition problems or Chinese word puzzles. Half were given success feedback; the other half failure feedback. Results indicated that the relationships between attributions and emotions were different when success was experienced than when failure was experienced. Inter-relationships within attributions under success and failure conditions were very similar, but the opposite was true for emotions. Emotional feelings were much stronger under the failure condition than the success condition. The findings suggest that future attributional studies should examine what occurs under both conditions because relationships are different under success and failure conditions. (Author/JAC)

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Relationships Between Cognitive Attributions and Affective Emotions Under Success Vs. Failure

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PROBLEM

In the last 30 years the study of the causes of behavior has become increasingly popular starting from Heider's naive psychology, to White's concept of competency to Rotter's internal-external control of reinforcement, de Charm's concept of origin vs. power. In the last 10 years, Bernard Weiner has emerged as a leading figure in this area of research. Weiner is a student of John Atkinson, and therefore is well versed in the Atkinson's high motivation approach. He has done extensive work linking attribution to achievement (1972, 1978, 1980). Recently he stated,

> "There is good reason not to subscribe to the belief espoused by Atkinson and McClelland et. al. that pride and shame are the emotions that characterize the achievement system. Indeed, whether achievement strivings are linked mostly with any particular affective reaction remains to be discovered." (Weiner 1980, p. 367)

One reason for this is that the emotions one feels seem not to be directly related to success or failure, but are dependent upon the reasons for why one succeeds or fails. This study was conducted to explore the relationship between different kinds of cognitive attributions and affective responses.

Data gathered by Weiner and others (Frieze, 1976) to date indicate that different emotions are associated with different attributions (Weiner et. al. 1978). For example, one may feel confident and pleased when success is attributed to ability, and surprised when success is attributed to luck. Failure resulting from lack of effort leads to emotions of shame and guilt, but failure as a result of other's efforts leads to aggressive feelings.

The attributions we make about the causes of our successes and failures not only influence the emotions we experience, but they may also influence our future expectancies of success and failure. In other words, there is mutual influence between cognitive expectations of success and failure and affective emotions. The primary goal of this paper is to specifically examine this relationship. In Weiner's work, the main goal is looking at effects of causal relations. Our emphasis in this paper is the situational context of success vs. failure. We hypothesized that the relationships between cognitive attributions and affective emotions would be different under success and under failure situations.

In addition, we also examined the interrelationships among emotions and among attributions under success and failure conditions separately. There has been little previous research published in this area, thus no foundation for making specific hypothesis. However, it did seem logical to postulate that one's predilection for certain emotions over others, or for certain attributions over others, are not likely to change when one faced either success or failure.

To summarize, the goals for this study are:

1. To explore the relationships between cognitive attributions and affective emotions under success and failure conditions. Our hypothesis is that there will be significant differences.
2. To explore the interrelationships among attributions under success and failure conditions. Our hypothesis is that there will be no significant differences.
3. To explore the interrelationships among emotions under success and failure conditions. Our hypothesis is that there will be no significant difference.

METHOD

Subjects: Ss were students recruited from introductory psychology classes at a predominantly white university on the east coast. Final analyses were conducted on 52 males and 156 females who met all criteria. The mean age was 20 years with a deviation of 3.0.

Procedure: Ss were asked to volunteer for a social psychology study. When Ss arrived at the lab they were asked to work on a task consisting either of 100 addition problems (skill) or 10 Chinese word puzzles (chance). Chinese words are symbols, the word for moon, sun etc. actually look like moon or sun. So for each Chinese word, four meanings were provided and students were asked to choose one. This was meant to be a chance task. In Weiner's term, the math problems would be a controllable task, the Chinese words would be uncontrollable task. After a short break half of the Ss

were given success feedback. The remainder were given failure feedback. Then subjects were asked to identify the causes for why they succeeded or failed from a prepared list. The list consisted of eight items, two bi-polar items for each of four causal attributions according to Weiner's scheme: ability, effort, task, and luck. The list was presented in a four point Likert format, ranging from "strongly agree" to "strongly disagree." Each subject was then asked how he/she felt about the success or failure, using ten affective labels provided on another list, these are listed on the left hand side of the page in Table 1. These affective labels were selected on the basis of past research, and the same four point Likert format was used. After the assessment of attributions and emotions, subjects were asked to state their expectations of future performance on a similar task. Another shorter series of task was administered. Subjects were then thanked and asked not to reveal the content of the experiment. A debriefing session was held for all subjects who participated in the study.

Analyses: Pearson Product Moment Correlation Coefficients were conducted among all relationships. To determine whether the relationships were different, the r's were transformed to Z's, then a significance test using the formula $z = \frac{Z_1 - Z_2}{\sqrt{\frac{1}{N_1-3} + \frac{1}{N_1-3}}}$ applied.

RESULTS

Table 1 shows the relationships between attributions and emotions under success and failure conditions. As you can see they are not very high, the highest was a coefficient of .50 between good luck and surprised under success, and a .43 between good luck and stunned under success. Table 2 shows only the significantly different relationships between attributions and emotions under success and failure conditions. Out of 80 possible pairs of relationships, 38 pairs were significantly different.

Table 3 shows the interrelationships among cognitive attributions under success and failure conditions. It is indeed amazing to find the high degree of similarity under the two different conditions. Both the direction, and the size of the correlation coefficients were very much alike. The test of significance between r's showed only one pair of r's that was significantly different between high ability and hard task, where $z = 2.0$, $p < .05$.

Table 4 shows the interrelationships among affective emotions under success and failure conditions. The test of significance between r's showed 9 significant pairs. Of these 9, 7 were between feeling stunned and every other emotion except feeling surprised. The other two pairs of significant relationships were between relaxed and disappointed, and relaxed and ashamed.

INTERPRETATION

Since 38 out of 80 (47.5%) pairs of correlations between attributions and emotions were significant, we felt comfortable concluding that the first hypothesis received support. In other words, the relationship between attributions and emotions are different when a person experiences success vs when he/she experiences failure. This finding is consistent with previous research.

There was only one significant interrelationship among the attributions of 28 possible pairs (3.6%). We concluded that overall there was no significant difference in the interrelationship among attributions under success and failure conditions. Thus, our second hypothesis also received support.

Nine out of 45 (20%) pairs of intercorrelations among emotions were significant. We had to conclude that our third hypothesis was rejected. A closer examination of the significant differences showed a consistent pattern: in all cases the relationship between emotions were more intense under failure than under success. This is an interesting pattern that we had not expected, but may be quite important in future studies on emotion. Of the 9 significant differences, 7 involved feeling stunned. Empirically then, feeling stunned connotes a more negative feeling than feeling surprised, since the emotion of stunned was always stronger under the failure condition. The other two pair of significantly different correlations were between relaxed and disappointed and relaxed and ashamed.

The relationships were all negative, but the intensities were stronger under the failure situation. This seems to be consistent with the trend for the other 7 significantly different r's, one felt less relaxed when one felt disappointed or ashamed under either success or failure, but this negative feeling of ashamed was much stronger under the failure condition.

In conclusion, this study showed the importance of situational variable, success and failure, it supported the hypothesis that success and failure condition lead to different relationships between attributions and emotions. Results also supported the hypothesis that success and failure made no difference in the interrelationships among attributions. However, the data did not support our third hypothesis, instead, results showed that the interrelationships among emotions were different under success and failure. Furthermore, the significant differences showed a consistent trend, that emotional feelings were much stronger under failure than under success condition. Future motivational research should take into account the differences in emotional feelings and intensity for persons experiencing failure feedback. These findings may have direct application for those who work in the field of education.

In addition, results from this study should serve as a cautious warning in the methodology of future research in the Weiner tradition. We say this because in the most recent research there is an attempt not to frustrate Ss, not to impair their egos, Weiner has looked at attributions and affections only under success situation, assuming that the relationships found would be similar under either success and failure. This study suggests that future research will need to look at relationships under both situations.

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